

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

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Application No.:	10/821,372	§	Examiner:	Eland, Shawn
Filed:	April 9, 2004	§	Group/Art Unit:	2188
Inventor(s):		§	Atty. Dkt. No:	5181-94901
Landin, et al.		§	Confirm No.	1210
		§		
		§		
		§		
Title:	MULTI-NODE	§		
	COMPUTER SYSTEM	§		
	WITH PROXY	§		
	TRANSACTION TO	§		
	READ DATA FROM A	§		
	NON-OWNING MEMORY	§		
	DEVICE	§		

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**REPLY BRIEF**

**Mail Stop Appeal Brief - Patents**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir/Madam:

In response to the Examiner's answer of July 9, 2008, Appellant presents this Reply Brief.

Appellant uses the same headings below that were used in the Appeal Brief, to reply to various arguments in the Answer. Appellant respectfully requests that this appeal be considered by the Board of Patent Appeals and Interferences.

## VII. ARGUMENT

### First Ground of Rejection:

#### Independent claims 1, 13, and 24:

In the response to arguments section (10) of the Examiner's Answer dated July 9, 2008, the Examiner alleges Appellant's argument with regard to whether Chandrasekaran teaches sending read data without regard to validity and not ownership "is irrelevant." Appellant submits, the Examiner's attempt to analogize validity with ownership sounds simple. However, it is wrong. More particularly, the Examiner asserts "validity shows the owner of the node because the node with the write access is the owner." Appellant submits this statement is erroneous. Clearly in the context of Chandrasekaran, the validity is not determined based on what entity owns the data. The validity is determined by when, in time, a read request arrives relative to a write to that same data. Thus, validity in this context has little to do with what entity owns the data, but rather when a request arrives. Appellant's assertion in the Appeal Brief regarding the read data being sent without regard to validity is absolutely correct in that, it is an optimistic read, and as such the read data is sent prior to determining via the write stamp, whether the data is valid. The Examiner then asserts "So, if the data is sent without regard to validity, and validity shows the owner of the node, then it follows that sending the data without regard to validity is the same as sending without regard to ownership responsibility." This statement is also erroneous. As noted above, validity, in this context does not show ownership. Clearly as described further below, from Chandrasekara at col. 2 lines 54-67, validity merely indicates whether the correct version of data is provided. Chandrasekaran further discloses "[i]f the read was started after the last write, the read is valid." (See col. 6, lines 25-36) Thus, one cannot leap to make the inference made by the Examiner in regard to validity and ownership.

Claim 1 recites in pertinent part

wherein in response to the coherency message, the interface is configured  
to send a first type of address packet on the address network if a

global access state of the coherency unit in the node is a modified state and to send a second type of address packet on the address network if the global access state is not the modified state;  
wherein in response to the second type of packet, the system memory is configured to send a data packet corresponding to the coherency unit on the data network, regardless of whether the memory has an ownership responsibility for the coherency unit. (Emphasis added)

Chandrasekaran is directed to optimistic reads and write time validity checking.

Taking Chandrasekaran in context, Chandrasekaran actually discloses

“This technique of starting the retrieval of the resource before receiving a response, such as a lock, to a request for permission to access the resource is referred to herein as an “optimistic read.” The techniques described herein not only perform an optimistic read but also determine whether the results of the optimistic read are valid, in the sense of providing the correct version of the resource retrieved. If the optimistic read is not valid, then the resource retrieved from the optimistic read is not used. In one embodiment of this aspect, if the version retrieved by the optimistic read is not valid, then another operation is initiated to retrieve the resource, but only after permission is received to access the resource. When the optimistic read results are valid sufficiently often, latency is reduced in retrieving resources.” (See col. 2 lines 54-67) (Emphasis added)

“In an embodiment using the first type of validity checking, the time that the optimistic read is started is compared to the latest time that the data block was written by any of the other nodes. If the read was started after the last write, the read is valid. This can be determined even before the read is finished, but involves the writing node publishing its write time to the other nodes. A node can publish its write time in any way, such as by broadcasting the write time to the other nodes, by storing the write time and responding to requests from other nodes, or by sending the write time to a lock manager. This type of validity checking is called “write-time” validity checking herein.” (See col. 6, lines 25-36) (Emphasis added)

From the foregoing, Appellant submits Chandrasekaran is disclosing an optimistic read operation in which the data is retrieved and then checked for validity. Appellant further submits the read data is apparently sent without regard to validity, and not whether

the memory has ownership responsibility. Neither the above passages nor any other discloses “the system memory is configured to send a data packet corresponding to the coherency unit on the data network, regardless of whether the system memory has an ownership responsibility for the coherency unit,” as recited in claim 1.

Furthermore, there is no teaching of the interface sending one kind of packet if the coherency unit in the node is in a modified state and a second type of packet if it is not in a modified state. The memory then responds to the second type of packet as described above. But it is “regardless of whether the memory has an ownership responsibility for the coherency unit” and not whether or not the data is valid. These are distinctly different.

Thus, Appellant submits neither Liencre's nor Chandrasekaran, taken either singly or in combination, teaches or suggests the combination of features recited in Appellant's claim 1.

Appellant's claims 13 and 24 recite features that are similar to the features recited in claim 1. Thus, for at least the above stated reasons, Appellant submits that the rejection of claims 1, 13, and 24 is in error and requests reversal of the rejection. The rejection of claims 2-12 (dependent from claim 1), claims 14-23 (dependent from claim 13), and claims 25-32 (dependent from claim 24) are similarly in error for at least the above stated reasons, and reversal of the rejection is requested. Each of claims 2-12, 14-23, and 25-32 recite additional combinations of features not taught or suggested in the cited art.

## **CONCLUSION**

For the foregoing reasons, it is submitted that the Examiner's rejection of claims 1-32 is erroneous, and reversal of his decision is respectfully requested.

The Commissioner is authorized to charge any fees that may be due to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5181-94901/SJC.

Respectfully submitted,

/ Stephen J. Curran /  
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